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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,941	10/30/2003	Klaus-Dieter Hammer	P179 1130.1	6279
26158 7590 07/09/2008 WOMBLE CARLYLE SANDRIDGE & RICE, PLLC ATTN: PATENT DOCKETING 32ND FLOOR P.O. BOX 7037 ATLANTA, GA 30357-0037				
EXAMINER				
O HERN, BRENT T				
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1794				
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07/09/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PatentDocketing@WCSR.COM

Office Action Summary

Application No.

10/695,941

Applicant(s)

HAMMER ET AL.

Examiner

Brent T. O'Hern

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-9,11-13,15-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-9,11-13,15-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 June 2008 has been entered.

Claims

2. Claims 1, 3-4, 6-9, 11-13, 15-18 and 20 are pending with claim 20 new.

WITHDRAWN REJECTIONS

3. The 35 U.S.C. 103(a) rejections of claims 1-4, 6-12, 15 and 17 as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634) of record in the Office Action mailed 14 January 2008, page 2, paragraph 5 have been withdrawn due to Applicant's amendments in the Paper filed 11 June 2008.

4. The 35 U.S.C. 103(a) rejections of claims 13 and 16 as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634) and further in view of Crevasse (US 5,215,495) of record in the Office Action mailed 14 January 2008, page 2, paragraph 6 have been withdrawn due to Applicant's amendments in the Paper filed 11 June 2008.

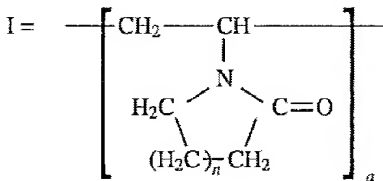
5. The 35 U.S.C. 103(a) rejection of claim 1 as being unpatentable over Hammer et al. (US 5,501,886) in view of Hammer et al. (US 4,529,634) of record in the Office Action mailed 14 January 2008, page 3, paragraph 7 has been withdrawn due to Applicant's amendments in the Paper filed 11 June 2008.
6. The 35 U.S.C. 103(a) rejection of claim 18 as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634) of record in the Office Action mailed 14 January 2008, page 3, paragraph 8 has been withdrawn due to Applicant's amendments in the Paper filed 11 June 2008.

NEW REJECTIONS

Claim Rejections - 35 USC § 103

7. Claims 1, 3-4, 6-9, 11-12, 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634) and Erk et al. (US 4,303,711).

Regarding claim 1, Hammer ('886) teaches a seamless tubular food casing comprising at least one copolymer comprising units of vinylpyrrolidone and units of at least one comonomer (*See Abs., ll. 1-6 and col. 4, l. 22 to col. 6, l. 2, specifically vinylpyrrolidone as illustrated in Formula-I and at least one comonomer.*),



and an admixture of cellulose hydrate (See col. 6, ll. 29-51.) carboxyl group-containing compounds (See col. 5, ll. 23-55, specifically ll. 51-55, hydrophilic "unsaturated carboxylic acids" and the other carboxyl groups within the greater passage exhibiting the unsaturated carboxylic acid and/or α , β -ethylenically unsaturated carboxylic acid functionality. Furthermore, the examiner interprets Hammer's ('886) express disclosure of "unsaturated carboxylic acids" to mean "unsaturated carboxylic acids" which encompass α , β -ethylenically unsaturated carboxylic acids such as acrylic and methacrylic acids. Applicant, discloses the same α , β -ethylenically unsaturated carboxylic acid's in a patent application filed over ten years prior to the filing of Hammer's ('886) (See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634)), wherein the weight ratio of the copolymer to cellulose is from 1:25 to 10:1, which equates to 10-96% (See col. 6, ll. 37-51 where Hammer's ('886) is from 0.1 to 100% as specifically stated in l. 46 clearly falls within all of the above claimed proportions, with corresponding percentage equivalents. Furthermore, see as evidence col. 4, ll. 25-60 of Erk ('711) where α , β -ethylenically unsaturated carboxylic acid's and esters are known polymer modifiers for sausage casings for the purpose of providing casings that are cheap and easy to make.), however, fails to expressly disclose a comonomer being selected from

the group consisting of vinyl alkanoate, vinyl alkyl ether, conjugated alkadiene, acrylamide and α , β -ethylenically unsaturated carboxylic acid.

However, Borodaev ('455) teaches where sausage casings comprising a copolymer with units of vinylpyrrolidone, α , β -ethylenically unsaturated carboxylic acids and cellulose derivatives such as cellulose ethers (*See p. 4, ll. 21-25 where acrylic acid and methacrylic acid are α , β -ethylenically unsaturated carboxylic acids.*) for the purpose of providing a film with good hydrophilic and mechanical properties (*See p. 4, ll. 6-8.*). Furthermore, acrylic acid and methacrylic acid clearly provide for improved hydrophilic properties, as opposed to esters, due to their hydrophilic carboxylic acid structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Hammer's ('886) unsaturated carboxylic group containing compounds, including those that Hammer ('886) expressly describes as "unsaturated carboxylic acids" with the α , β -ethylenically unsaturated carboxylic acids as taught by Borodaev ('455) in order to provide a film with good hydrophilic and mechanical properties.

Regarding claims 3-4, Hammer ('886) teaches a casing wherein the weight ratio of the copolymer to cellulose is from 1:5 to 5:1, which equates to 17-83% for claim #3/(1:4 to 4:1, which equates to 20-80% for claim #4) (*See col. 6, ll. 37-51 wherein Hammer's ('886) is from 0.1 to 100% as specifically stated in l. 46 clearly falls within all of the above claimed proportions, with corresponding percentage equivalents.*).

Regarding claims 6-7, Hammer ('886) teaches a casing wherein the proportion of

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comonomer units is less than 50 mol %/(30 mol %) based on the sum of all monomer and comonomer units in the copolymer (*See col. 6, ll. 29-51 and ll. 8-10, specifically l. 46 where the weight % is as low as 0.1% for a mean molecular weight from 500,000-1,500,000 which is clearly less than 30%/50%.*).

Regarding claim 8, Hammer ('886) teaches a casing comprising a fiber reinforcement (*See col. 5, l. 12.*).

Regarding claim 9, Hammer ('886) teaches a casing wherein the fiber reinforcement comprises a hemp fiber paper (*See col. 10, l. 66.*).

Regarding claim 11, Hammer ('886) teaches a casing wherein the copolymer is a mixture with the cellulose hydrate comprises a layer on the outside of the fiber reinforcement (*See col. 10, l. 66 to col. 11, l. 16 where the hemp is coated with the cellulose hydrate and col. 4, ll. 23-67 and col. 2, ll. 51-64 where the cellulose hydrate is disclosed.*).

Regarding claim 12, Hammer ('886) teaches a casing wherein the copolymer is present in an amount sufficient to inhibit or suppress mold growth (*See col. 6, ll. 29-51 where the amount of copolymer can be varied and a person having ordinary skill in the art would know that said varied amount is sufficient to suppress mold growth. Furthermore, the Examiner interprets any amounts of copolymer to be sufficient.*).

Regarding claim 15, Hammer ('886) teaches an artificial sausage comprising a food casing (*See col. 1, l. 9.*).

Regarding claim 16, Hammer ('886) teaches a sausage comprising a food casing (*See Abstract.*).

Regarding claim 17, Hammer ('886) teaches a shirred stick (*See col. 10, ll. 57-60.*).

Regarding claims 18 and 20, Hammer ('886) teaches a food casing comprising cellulose and an additive (*See col. 7, ll. 15-27 and col. 8, ll. 15-38*), wherein the seamless tubular food casing comprising at least one copolymer comprising units of vinylpyrrolidone and units of at least one comonomer (*See Abs., ll. 1-6 and col. 4, l. 22 to col. 6, l. 2, specifically vinylpyrrolidone as illustrate in Formula-I and at least one comonomer.*), and an admixture of cellulose hydrate (*See col. 6, ll. 29-51.*) carboxyl group-containing compounds (*See col. 5, ll. 23-55, specifically ll. 51-55, hydrophilic "unsaturated carboxylic acids" and the other carboxyl groups within the greater passage exhibiting the unsaturated carboxylic acid and/or α , β -ethylenically unsaturated carboxylic acid functionality. Furthermore, the Examiner interprets Hammer's ('886) express disclosure of "unsaturated carboxylic acids" to include "unsaturated carboxylic acids" which encompass α , β -ethylenically unsaturated carboxylic acid's such as acrylic and methacrylic acids since Applicant, discloses the same α , β -ethylenically unsaturated carboxylic acid's in a patent application filed over ten years prior to the filing of Hammer's ('886) (*See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634)*), wherein the weight ratio of the copolymer to cellulose is from 1:25 to 10:1, which equates to 10-96% (*See col. 6, ll. 37-51 where Hammer's ('886) is from 0.1 to 100% as specifically stated in l. 46 clearly falls within all of the above claimed proportions, with corresponding percentage equivalents.*), however, fails to expressly disclose a comonomer being selected from the group consisting of vinyl alkanoate, vinyl alkyl ether, conjugated*

alkadiene, acrylamide and α , β -ethylenically unsaturated carboxylic acid and wherein the presence of the additive is in amount sufficient to achieve, as compared to a food casing comprising cellulose without the additive: (i) lower permeation while water vapor permeability is preserved, (ii) reduced susceptibility to cellulase and increased resistance to mold, or (iii) a greater affinity of said casing to sausage-meat emulsion.

However, Borodaev ('455) teaches a sausage casing comprising a copolymer with units of vinylpyrrolidone, α , β -ethylenically unsaturated carboxylic acid and cellulose derivatives such as cellulose ethers (*See p. 4, ll. 21-25 where acrylic acid and methacrylic acid are α , β -ethylenically unsaturated carboxylic acids.*) for the purpose of providing a film with good hydrophilic and mechanical properties (*See p. 4, ll. 6-8.*). Furthermore, acrylic acid and methacrylic acid clearly provide for improved hydrophilic properties, as opposed to esters, due to their hydrophilic carboxylic acid structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Hammer's ('886) unsaturated carboxylic group containing compounds, including those that Hammer ('886) expressly describes as "unsaturated carboxylic acids" with the α , β -ethylenically unsaturated carboxylic acids as taught by Borodaev ('455) in order to provide a film with good hydrophilic and mechanical properties.

Furthermore, it would have been obvious to a person having ordinary skill in the art at the time Applicant's invention was made that the cellulose, the additive and the processing parameters can be varied to provide lower permeation depending on the requirements of use (*See col. 7, ll. 15-27 and col. 8, ll. 15-38.*). Furthermore, the phrase

"permeability is preserved" is interpreted as providing for the existence of or non existence of any amount of permeability.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to vary the above parameters in order to provide for the above permeation.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Borodaev et al. (WO 02/078455) with evidence by Hammer et al. (US 4,529,634) and further in view of Crevasse (US 5,215,495) and Nicholson et al. (US 5,597,587).

Hammer ('886) and Borodaev ('455) teach the casing discussed above and Hammer ('886) teaches where the casing is shirred to form a shirred stick (*See col. 10, l. 56.*), however, fail to expressly disclose a length from 5 to 100 m.

However, Crevasse ('495) teaches a length from 5 to 100 m (*See col. 3, ll. 56-59.*) for the purpose of encasing a large number of sausages (*See col. 3, ll. 58-59.*). Additionally, Nicholson ('587) teaches a shirring operation for lengths of 60 meters (*See col. 9, ll. 65-67.*) for the purpose of providing a large number of sticks (*See col. 9, ll. 60-67.*). Furthermore, Applicant has not set forth any criticality of providing of providing any particular length and it would have been obvious to make longer or shorter lengths depending on the customer requirements.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to modify Hammer's ('886) casing with a shirred

stick from 5 to 100 m as taught by Crevasse ('495) and Nicholsson ('587) in order to provide encasing for a large number of sausages.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hammer et al. (US 5,501,886) in view of Hammer et al. (US 4,529,634) with evidence by Erk et al. (US 4,303,711).

Regarding claim 1, Hammer ('886) teaches a seamless tubular food casing comprising at least one copolymer comprising units of vinylpyrrolidone and units of at least one comonomer (*See Abs., ll. 1-6 and col. 4, l. 22 to col. 6, l. 2, specifically vinylpyrrolidone as illustrate in Formula-I and at least one comonomer.*), and an admixture of cellulose hydrate (*col. 6, ll. 29-51*) carboxyl group-containing compounds (*See col. 5, ll. 23-55, specifically ll. 51-55, hydrophilic "unsaturated carboxylic acids" and the other carboxylic groups within the greater passage exhibiting the unsaturated carboxylic acid and/or α , β -ethylenically unsaturated carboxylic acid functionality. Furthermore, the examiner interprets Hammer's ('886) express disclosure of "unsaturated carboxylic acids" to include "unsaturated carboxylic acids" which encompass α , β -ethylenically unsaturated carboxylic acid's such as acrylic and methacrylic acids since Applicant, disclosed the same α , β -ethylenically unsaturated carboxylic acid's in a patent application filed over ten years prior to the filing of Hammer ('886) (*See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634).*). Furthermore, see as evidence col. 4, ll. 25-60 of Erk ('711) where α , β -ethylenically unsaturated carboxylic acid's and esters are known polymer modifiers for sausage casings for the purpose of providing casings that are cheap and easy to make.)* , wherein the weight ratio of the

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copolymer to cellulose is from 1:25 to 10:1, which equates to 10-96% (*See col. 6, ll. 37-51 where Hammer's ('886) is from 0.1 to 100% as specifically stated in l. 46 clearly falls within all of the above claimed proportions, with corresponding percentage equivalents.*), however, fails to expressly disclose a comonomer being selected from the group consisting of vinyl alkanoate, vinyl alkyl ether, conjugated alkadiene, acrylamide and α , β -ethylenically unsaturated carboxylic acid.

However, Hammer ('634) teaches sausage casings comprising a copolymer with units of α , β -ethylenically unsaturated carboxylic acid (*See col. 4, ll. 4-29, acrylic and methacrylic acids, which are α , β - ethylenically unsaturated carboxylic acid's.*) for the purpose of providing a film with good hydrophilic and mechanical properties while inhibiting mold (*See col. 4, ll. 4-29 and col. 3, ll. 29-43.*). Furthermore, acrylic acid and methacrylic acid clearly provide for improved hydrophilic properties, as opposed to esters, due to their carboxylic acid structure.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute Hammer's ('886) unsaturated carboxylic group containing compounds, including those that Hammer ('886) expressly describes as "unsaturated carboxylic acids" with the α , β -ethylenically unsaturated carboxylic acid as taught by Borodaev ('455) in order to provide a film with good hydrophilic and mechanical properties.

ANSWERS TO APPLICANT'S ARGUMENTS

10. In response to Applicant's argument (p. 5, para. 4 to p. 6, para. 2 of Applicant's Paper filed 11 June 2008) that Hammer et al. (US 5,501,886) does not disclose a

polymer comprising "unsaturated carboxylic acids", it is noted Applicant has had multiple opportunities to precisely address Hammer's ('886) express teachings of "unsaturated carboxylic acids" as disclosed in lines 51-55 of column 5 as cited by the Examiner including p. 5, para. 9 of the Office action mailed 14 January 2008, however, has not done so. The Examiner interprets Applicant's acquiescence and failure to expressly address said expressed teaching of "unsaturated carboxylic acids" as an admission that Hammer ('886) does teach "unsaturated carboxylic acids". On p. 6, paras. 1-3 of Applicant's Paper filed 4 December 2007 Applicant cites lines 22-26 of column 5 of Hammer ('886) to support its' position, however, does not address the express teaching of "unsaturated carboxylic acids" as disclosed as discussed above. The only plausible reason why Applicant does not want to address this express teaching is that said teaching contradicts Applicant's position and teaches what Applicant does not want it to teach. Furthermore, inventor Hammer, a named inventor in Hammer ('886), defines "unsaturated carboxylic acids" to encompass α , β -ethylenically unsaturated carboxylic acid's such as acrylic and methacrylic acids in a patent application (*See col. 4, ll. 4-29 of Hammer et al. (US 4,529,634).*) filed over ten years prior to the filing of Hammer ('886).

11. In response to Applicant's argument (p. 5, para. 6 to p. 6, para. 2 of Applicant's Paper filed 11 June 2008) that Borodaev ('455) does not teach cellulosic casings, it is noted that Applicant does not claim "cellulosic films" but rather a casing comprising cellulose hydrate and other non-cellulose monomers. Furthermore, as discussed above, Borodaev ('455) does teach casings made of cellulose derivatives.

12. In response to Applicant's arguments (*p. 6, para. 3 to p. 7, para. 2 of Applicant's Paper filed 11 June 2008*) that there is not any teaching or suggestion by the references, in particular Crevasse ('495) for a casing of 5 to 100 meters, it is noted that Applicant has not presented any argument of where such a length is critical. Additionally, as discussed above, Nicholson ('587) teaches shirring for lengths of 60 meters. Furthermore, it would have been obvious to make casings longer or shorter, including the range as claimed in order to satisfy the particular requirements of the customer.

13. In response to Applicant's discussion (*p. 7, paras. 3-4 of Applicant's Paper filed 11 June 2008*) regarding Hammer ('886) and Hammer ('634) it is noted that Applicant has presented conclusions, however, no precise arguments or analysis to support said conclusions.

14. In response to Applicant's arguments (*p. 7, para. 5 to p. 8, para. 2 of Applicant's Paper filed 11 June 2008*) that since Hammer ('886) also teaches other monomers it does not teach the monomers of per claim #18, it is noted as discussed above that Hammer ('886) teaches vinylpyrrolidone and carboxyl group-containing compounds group-containing compounds and Applicant has elected to avoid addressing the express teachings of Hammer ('886).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T O'Hern/
Examiner, Art Unit 1794
June 27, 2008

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794